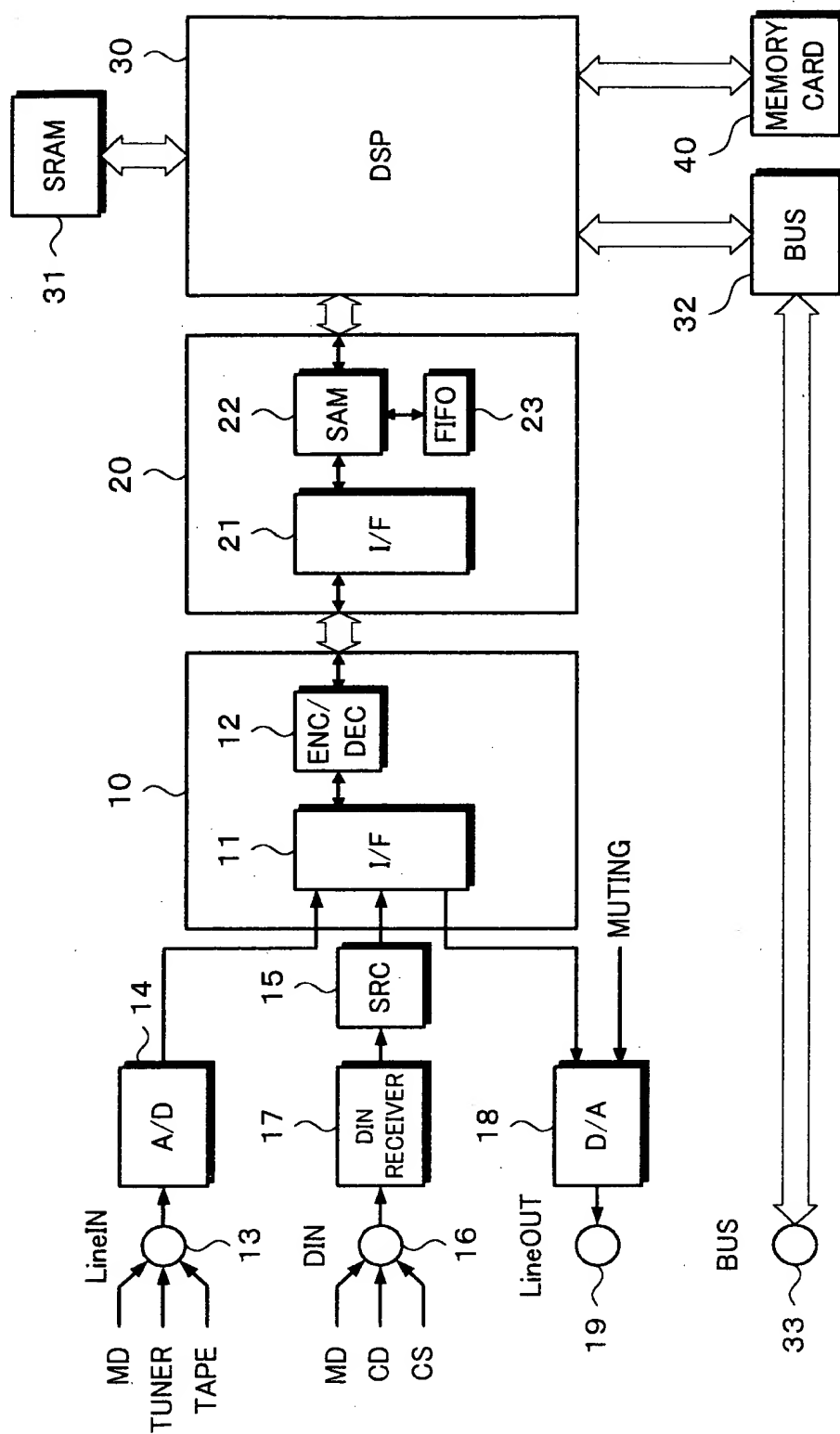


Fig. 1



CONFIDENTIAL

Fig. 2

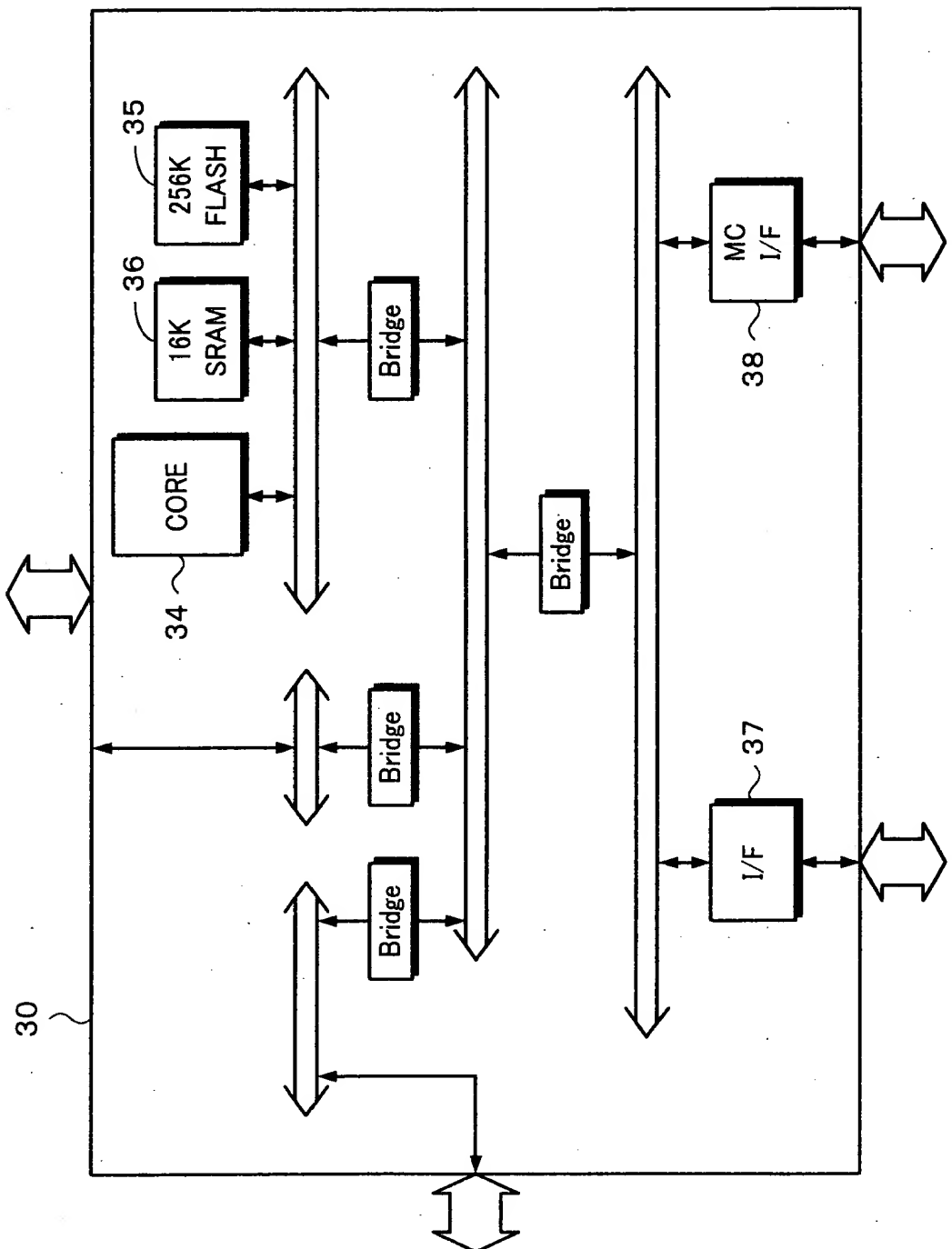


Fig. 3

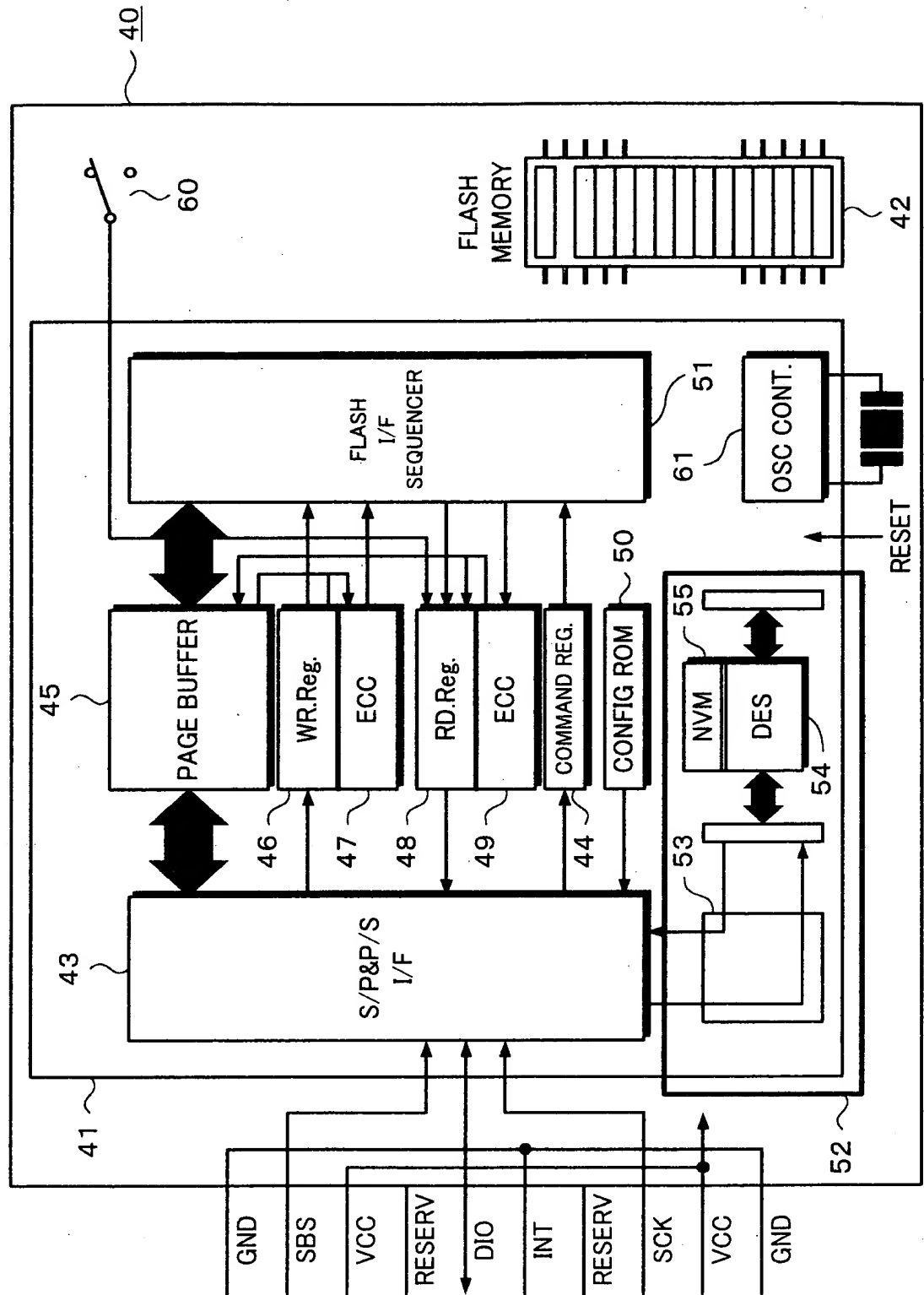


Fig. 4

APPLICATION PROCESS
FILE MANAGEMENT PROCESS
LOGICAL ADDRESS MANAGEMENT
PHYSICAL ADDRESS MANAGEMENT
FLASH MEMORY ACCESS

FILE SYSTEM PROCESS
HIERARCHY

00T0T "Tth2380

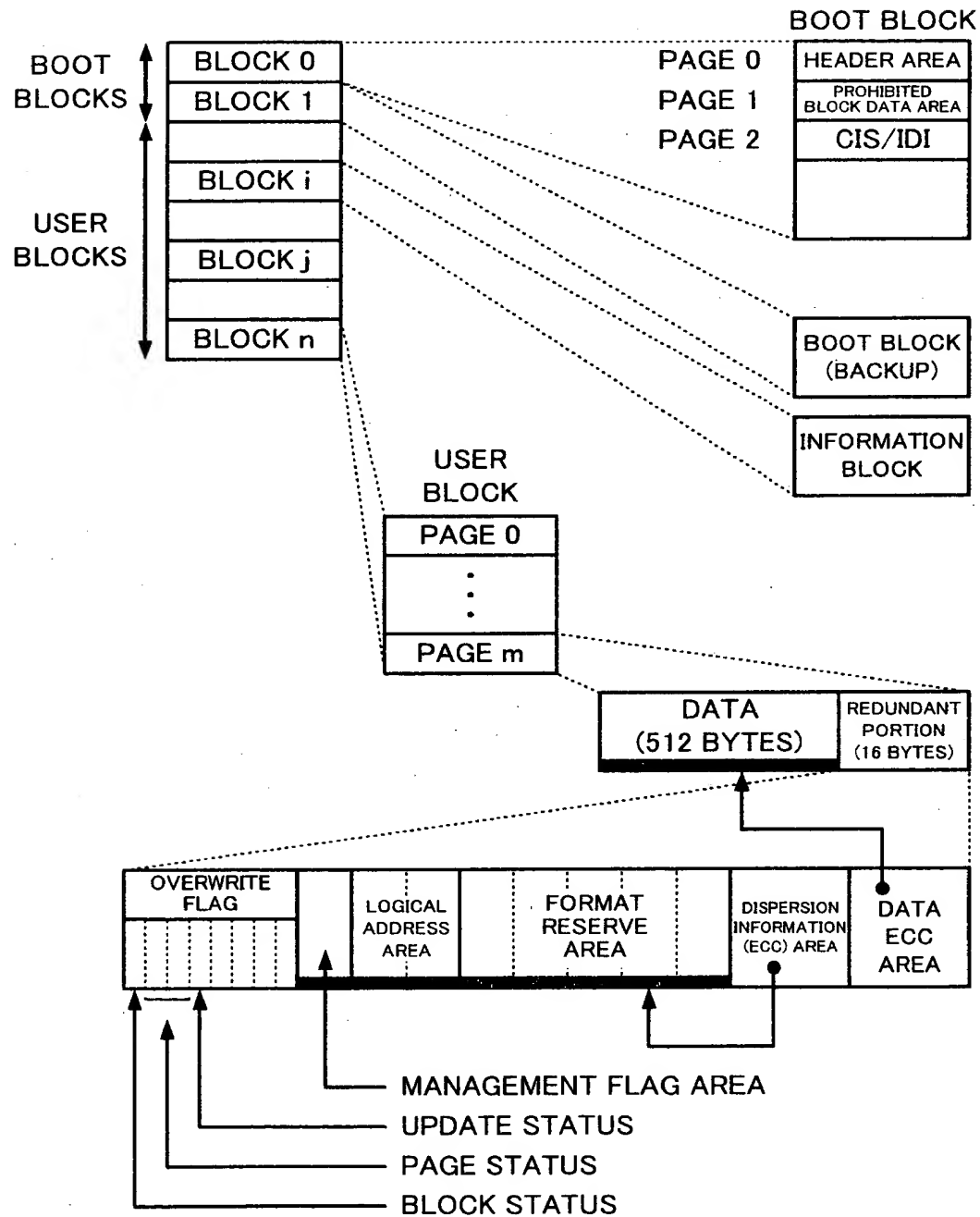
Fig. 5

Fig. 6

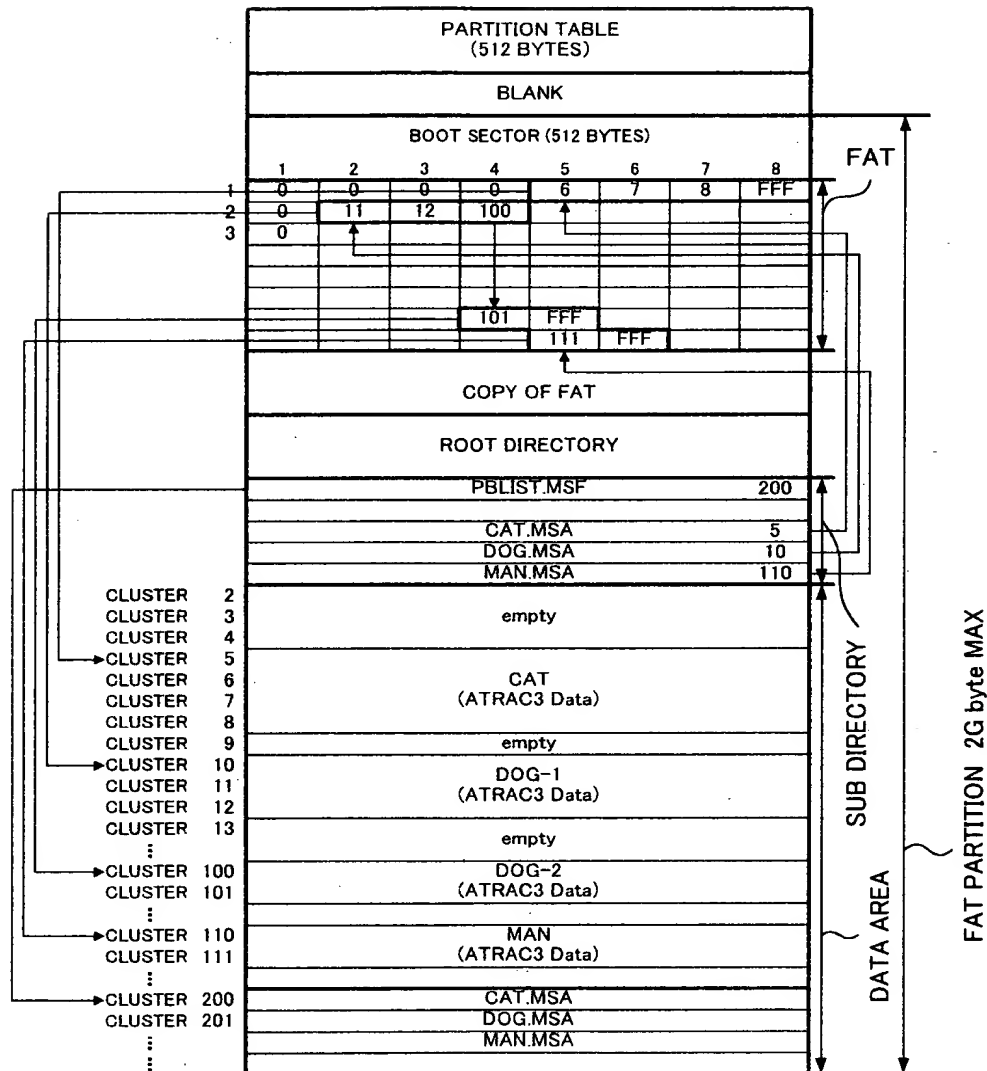


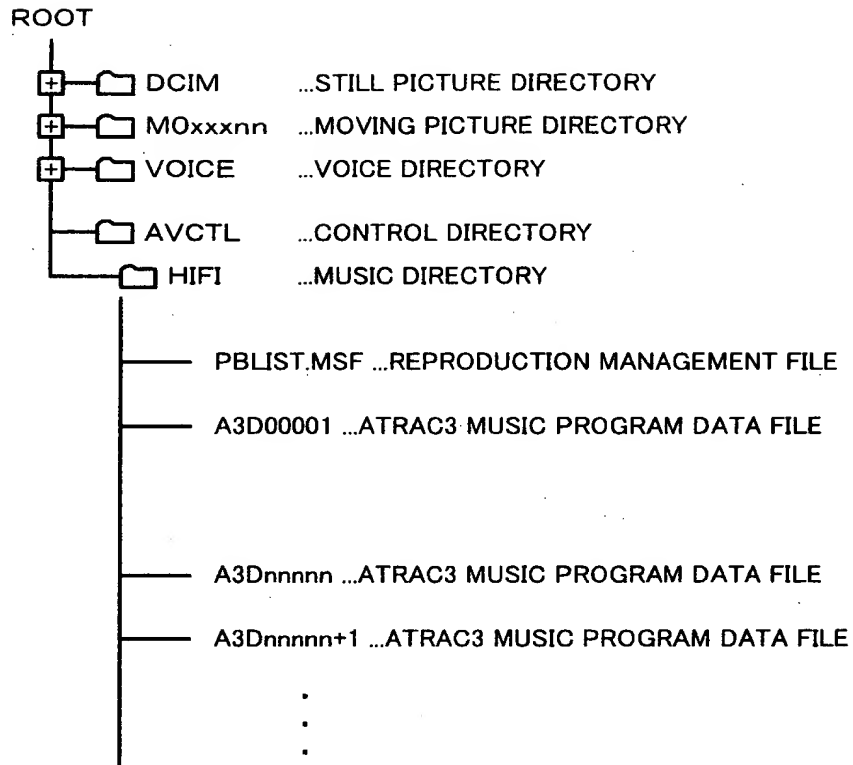
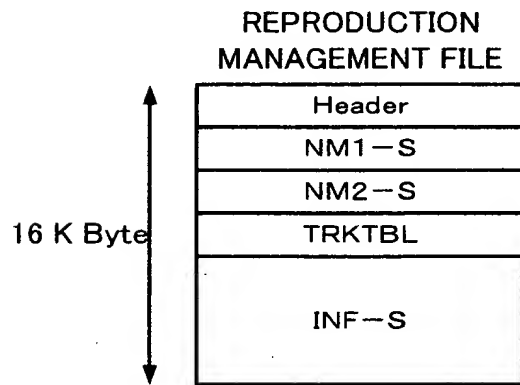
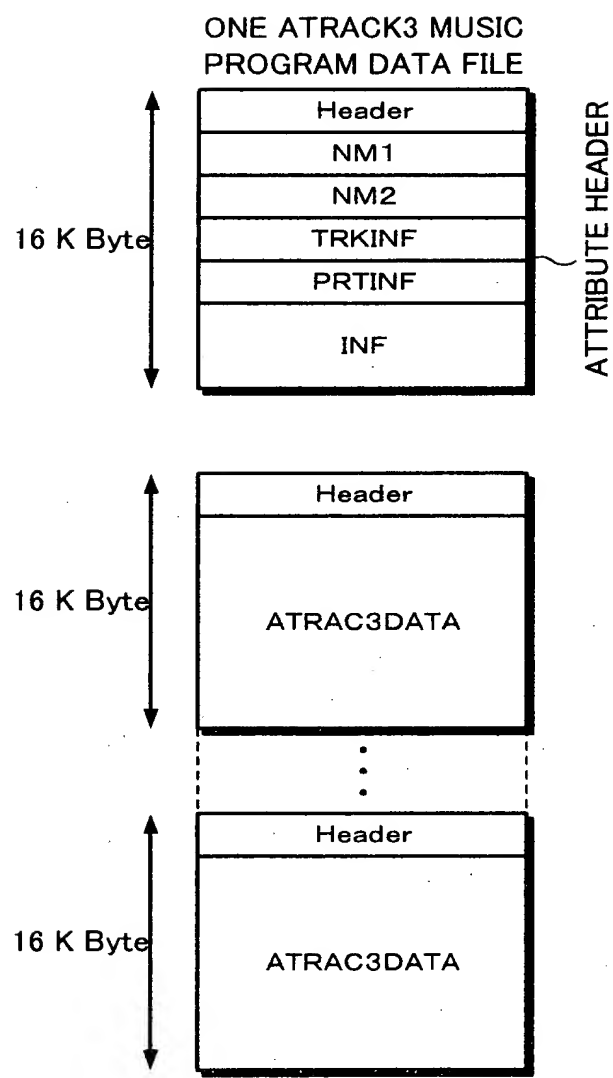
Fig. 7**Fig. 8**

Fig. 9



00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000

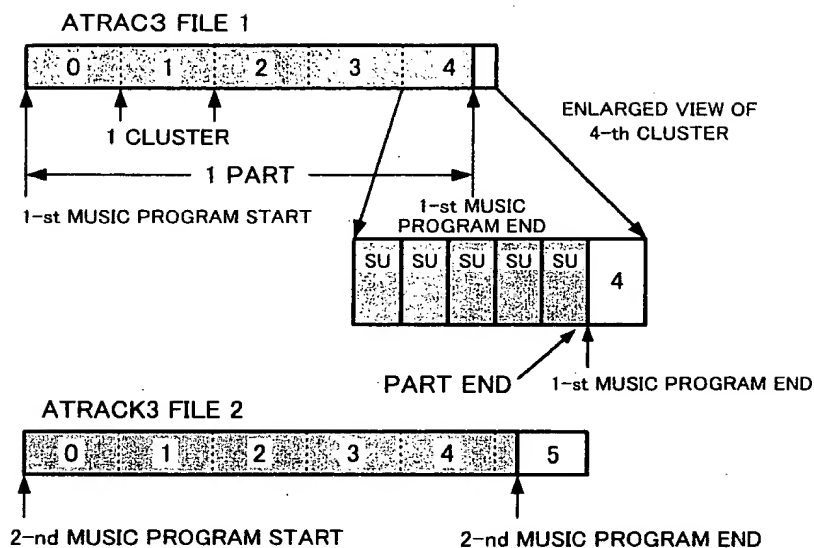
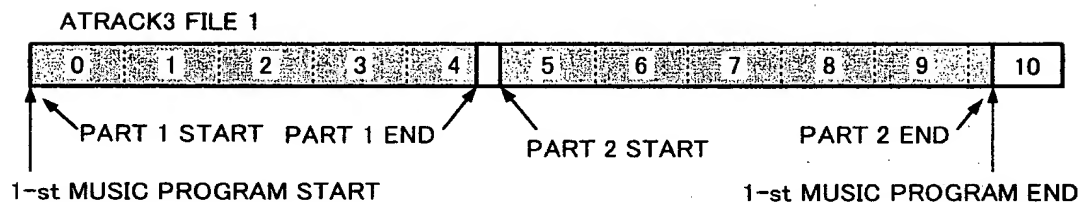
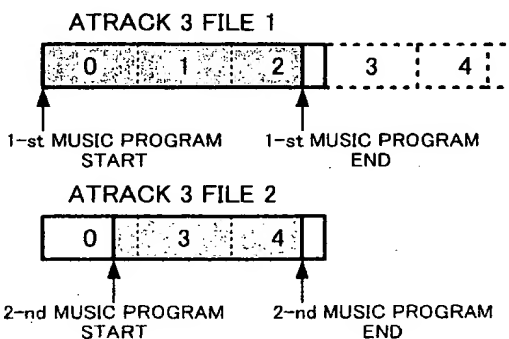
Fig. 10A**Fig. 10B****Fig. 10C**

Fig. 11

REPRODUCTION MANAGEMENT FILE (PBLIST)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
0X0000	BLKID-TLO			Reserved	MCode	REVISION			Reserved								
0X0010	SN1C+L	SN2C+L		SINFSIZE	T-TRK	VerNo			Reserved								
0X0020	NM1-S(256)																
0X0120	NM2-S(512)																
0X0320	Reserved				CONTENTSKEY												
0X0330	Reserved				MAC												
0X0350	Reserved																
	TRK-001	TRK-002	TRK-003	TRK-004	TRK-005	TRK-006	TRK-007	S-YMDhms									
	TRK-009	TRK-010	TRK-011	TRK-012	TRK-013	TRK-014	TRK-015	TRK-016									
0X0660	TRK-393	TRK-394	TRK-395	TRK-396	TRK-397	TRK-398	TRK-399	TRK-400									
0X0647	INF-S(14720)																
0X3FF0	BLKID-TLO				Reserved	MCode	REVISION				Reserved						

Fig. 12B

0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
INF	0x00	ID	0x00	SIZE	MCode	C+L	Reserved	DATA VARIABLE LENGTH							

Fig. 12C

Fig. 13

ID	MUSIC INFORMATION (CHARACTERS)		ID	URL INFORMATION (WEB INFORMATION)	
0	RESERVED		32	RESERVED	
1	ALBUM	VARIABLE	33	ALBUM	VARIABLE
2	SUBTITLE	VARIABLE	34	SUB TITLE	VARIABLE
3	ARTIST	VARIABLE	35	ARTIST	VARIABLE
4	CONDUCTOR	VARIABLE	36	CONDUCTOR	VARIABLE
5	ORCHESTRA	VARIABLE	37	ORCHESTRA	VARIABLE
6	PRODUCER	VARIABLE	38	PRODUCER	VARIABLE
7	PUBLISHER	VARIABLE	39	PUBLISHER	VARIABLE
8	COMPOSER	VARIABLE	40	COMPOSER	VARIABLE
9	SONG WRITER	VARIABLE	41	SONG WRITER	VARIABLE
10	ARRANGER	VARIABLE	42	ARRANGER	VARIABLE
11	SPONSOR	VARIABLE	43	SPONSOR	VARIABLE
12	CM	VARIABLE	44	CM	VARIABLE
13	GUIDE	VARIABLE	45	GUIDE	VARIABLE
14	ORIGINAL MUSIC PROGRAM TITLE	VARIABLE	46	ORIGINAL MUSIC PROGRAM TITLE	VARIABLE
15	ORIGINAL ALBUM TITLE	VARIABLE	47	ORIGINAL ALBUM TITLE	VARIABLE
16	ORIGINAL MUSIC PROGRAM COMPOSER	VARIABLE	48	ORIGINAL MUSIC PROGRAM COMPOSER	VARIABLE
17	ORIGINAL MUSIC PROGRAM SONG WRITER	VARIABLE	49	ORIGINAL MUSIC PROGRAM SONG WRITER	VARIABLE
18	ORIGINAL MUSIC PROGRAM ARRANGER	VARIABLE	50	ORIGINAL MUSIC PROGRAM ARRANGER	VARIABLE
19	ORIGINAL MUSIC PROGRAM PERFORMER	VARIABLE	51	ORIGINAL MUSIC PROGRAM PERFORMER	VARIABLE
20	MESSAGE	VARIABLE	52		
21	COMMENT	VARIABLE	53		
22	WARNING	VARIABLE	54		
23	GENRE	VARIABLE	55		
24			56		
25			57		
26			58		
27			59		
28			60		
29			61		
30			62		
31			63		

Fig. 14

ID	PATH/OTHERS		ID	CONTROL/NUMERIC DATA INFORMATION	
64	RESERVED		96	RESERVED	
65	PATH TO VIDEO DATA	VARIABLE	97	ISRC	8
66	PATH TO SONG DATA	VARIABLE	98	TOC_ID	8
67	PATH TO MIDI DATA	VARIABLE	99	UPC/JAN	7
68	PATH TO GUIDE DATA	VARIABLE	100	RECORDED DATE (YMDhms)	4
69	PATH TO COMMENT DATA	VARIABLE	101	RELEASED DATE	4
70	PATH TO CM DATA	VARIABLE	102	ORIGINAL MUSIC PROGRAM RELEASED DATE (YMDhms)	4
71	PATH TO FAX DATA	VARIABLE	103	RECORDED DATE (YMDhms)	4
72	PATH TO COMMUNICATION DATA 1	VARIABLE	104	SUB TRACK	4
73	PATH TO COMMUNICATION DATA 2	VARIABLE	105	AVERAGE VOLUME LEVEL	1
74	PATH TO CONTROL DATA	VARIABLE	106	RESUME	4
75			107	REPRODUCTION LOG (YMDhms)	4
76			108	NUMBER OF REPRODUCTION TIMES (FOR LEARNING)	1
77			109	PASSWORD 1	16
78			110	APPLLevel	16
79			111	GENRE CODE	1
80			112	MIDI DATA	
81			113	THUMB NAIL PHOTOGRAPH DATA	
82			114	TEXT MULTIPLEXED BROADCAST DATA	
83			115	NUMBER OF TOTAL MUSIC PROGRAMS	
84			116	SET NUMBER	
85			117	NUMBER OF TOTAL SETS	
86			118	REC POSITION INFORMATION - GPS	VARIABLE
87			119	PB POSITION INFORMATION - GPS	VARIABLE
88			120	REC POSITION INFORMATION - PHS	VARIABLE
89			121	PB POSITION INFORMATION - PHS	VARIABLE
90			122	CONNECTION DESTINATION TELEPHONE NUMBER 1	VARIABLE
91			123	CONNECTION DESTINATION TELEPHONE NUMBER 2	VARIABLE
92			124	INPUT VALUE	VARIABLE
93			125	OUTPUT VALUE	VARIABLE
94			126	PB CONTROL DATA	VARIABLE
95			127	REC CONTROL DATA	VARIABLE

Fig. 15

ID	SYNCHRONOUS REPRODUCTION INFORMATION	
128	RESERVED	
129	SYNCHRONOUS REPRODUCTION INFORMATION 1	VARIABLE
130	SYNCHRONOUS REPRODUCTION INFORMATION 2	VARIABLE
131	SYNCHRONOUS REPRODUCTION INFORMATION 3	VARIABLE
132	SYNCHRONOUS REPRODUCTION INFORMATION 4	VARIABLE
133	SYNCHRONOUS REPRODUCTION INFORMATION 5	VARIABLE
134	SYNCHRONOUS REPRODUCTION INFORMATION 6	VARIABLE
135		
136		
137		
138	EMD INFORMATION 1	VARIABLE
139	EMD INFORMATION 2	VARIABLE
140		
141		
142		
143		
144		
145		
146		
147		
148		
149		
150		
151		
152		
153		
154		
155		
156		
157		
158		
159		

00T0T" Tttt2960

Fig. 16A

0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
IN	0x00	ID	0x00	SIZE	Mcode	C+L	Reserved	VARIABLE LENGTH DATA							

Fig. 16B

ID	ARTIST		SIZE	ASCII ENGLISH						DATA			
0x69	0x00	3	0x00	0x1C(28)	Mcode	0x01	0x09	0x00	0x00	S	I	M	O
N	&	G	R	A	F	U	N	K	E	L	0x00		

Fig. 16C

SIZE							BINARY NOT SET				ID		ISRC					
0x14(20)							Mcode				0x69		0x00		97		0x00	
ISRC Code 8byte																		
DATA																		

Fig. 16D

RECORDED DATE			SIZE	BINARY NOT SET						DATA			
0x69	0x00	103	0x00	0x10(16)	Mcode	0x00	0x00	0x00	0x00	YMD hms			
										745	565		
										Y	M	D	h m s
										31,30,29 3,2,1,0bit			

Fig. 16E

REPRODUCTION LOG			SIZE	BINARY NOT SET						DATA			
0x69	0x00	107	0x00	0x10(16)	Mcode	0x00	0x00	0x00	0x00	YMD hms			
										745	565		
										Y	M	D	h m s
										31,30,29 3,2,1,0bit			

A3Dnnnnnn.MSA(ATRAC3 DATA FILE)

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Fig. 18

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0x0000	BLKID-HD0				Reserved		MCode		Reseved				BLOCK SERIAL			
0x0010	N1C+L		N2C+L		INFSIZE		T-PRT		T-SU				INX		XT	
0x0020	NM1(256)															
0x0120	NM2(512)															
0x0310																

Fig. 19

0x0320	Reserved(8)				CONTENTSKEY			
	Reserved(8)				MAC			
	Reserved(12)				A	LT	FNo	
	MG(D)SERIAL- <i>nnn</i>							
0x0360	CONNUM	YMDhms-S	YMDhms-E	MT	CT	CC	CN	

Fig. 20

bit7:MODE OF ATRAC3 0: Dual 1: Joint

bit6,5,4 N OF 3 BITS:MODE VALUE

N	MODE	TIME	TRANSMISSION RATE	SU	BYTES
7	HQ	47min	176kbps	31SU	512
6		58min	146kbps	38SU	424
5	EX	64min	132kbps	42SU	384
4	SP	81min	105kbps	53SU	304
3		90min	94kbps	59SU	272
2	LP	128min	66kbps	84SU	192
1	mono	181min	47kbps	119SU	136
0	mono	258min	33kbps	169SU	96

bit3:Reserved

bit2:DATA TYPE 0:AUDIO 1:OTHER

bit1:REPRODUCTION SKIP 0:NORMAL REP 1:SKIP

bit0:EMPHASIS 0:OFF 1:ON(50/15 μ S)

Fig. 21

bit7	:COPY PERMISSION	0:COPY PROHIBITION	1:COPY PERMISSION
bit6	:GENERATION	0:ORIGINAL	1:FIRST OR LATER COPY GENERATION
HCMS bit5-4 :COPY CONTROL FOR HIGH SPEED DIGITAL COPY			
	00:COPY PROHIBITION	01:COPY FIRST GENERATION	10:COPY PERMISSION
	COPY OPERATION OF CHILD OF FIRST COPY GENERATION IS PROHIBITED.		
bit3-2	MagicGate AUTHENTICATION LEVEL		
	00:Level10(Non-MG)	01:Level1	
	10:Level2	11:Reserved	
	DIVIDE AND COMBINE ARE PROHIBITED IN OTHER THAN LEVEL 10.		
bit1,0	Reserved		

Fig. 22

0x0370	PRTSIZE	PRTKEY	Reserved(8)
0x0380		CONNUM0	PRTSIZE(0x0388)
0x0390		Reserved(8)	CONNUM0

Fig. 23

0x4000	BLKID-A3D	Reserved	MCode	CONNUM0	BLOCK SERIAL
0x4010	BLOCK SEED			INITILIZATION VECTOR	
0x4020	SU-000(Nbyte=384byte)				

Fig. 24A

Fig. 24

Fig. 24A

Fig. 24B

Fig. 24C

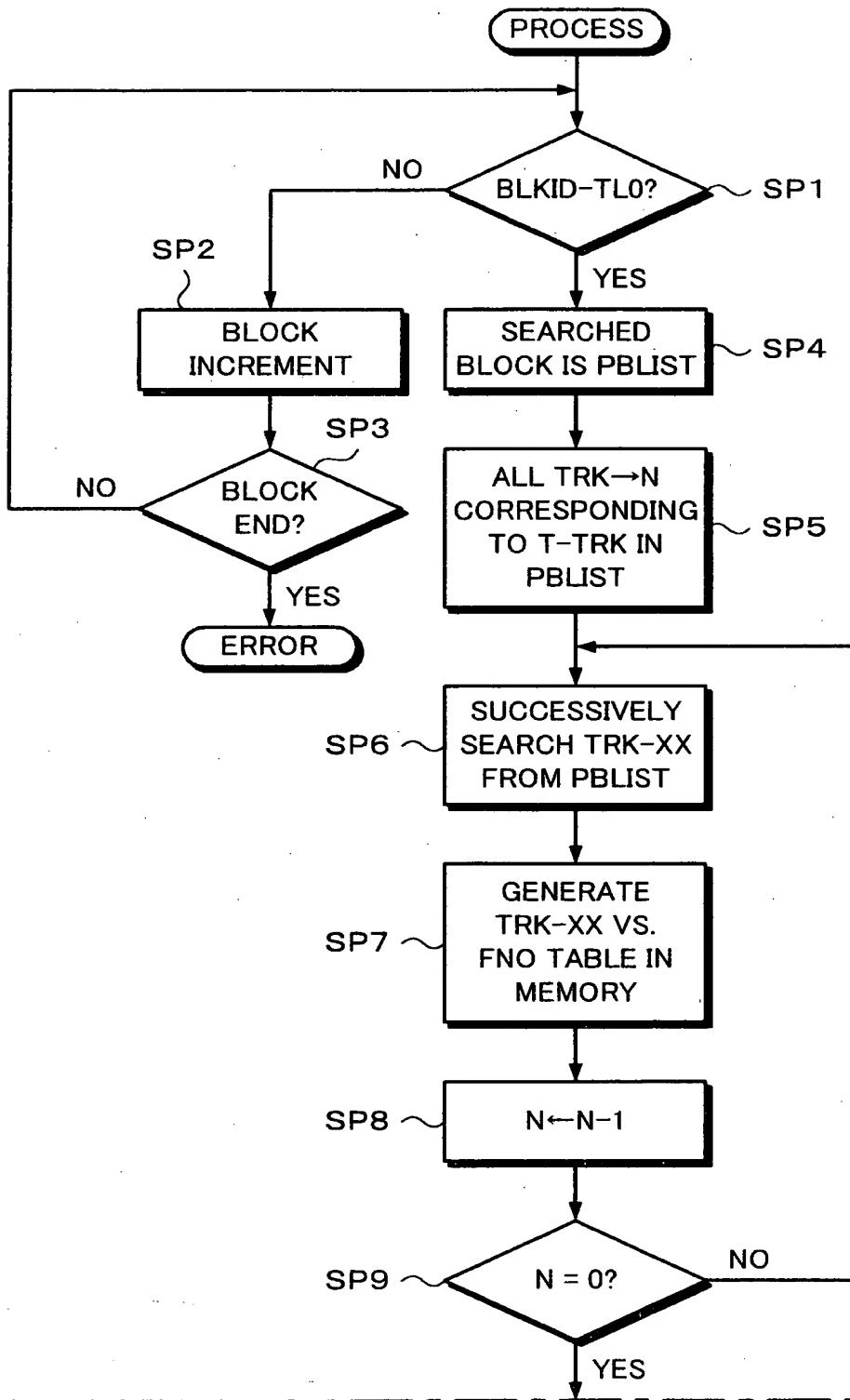


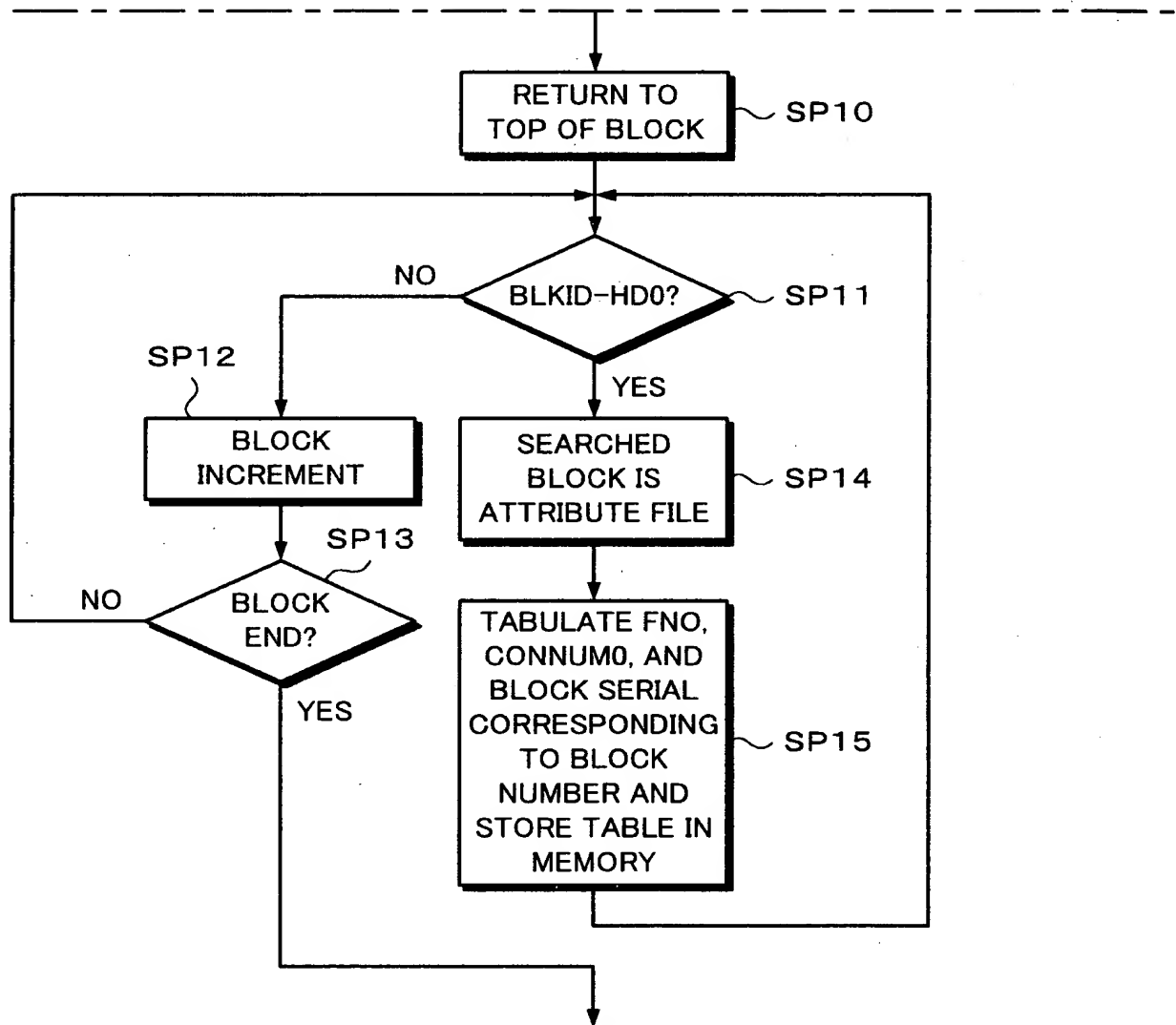
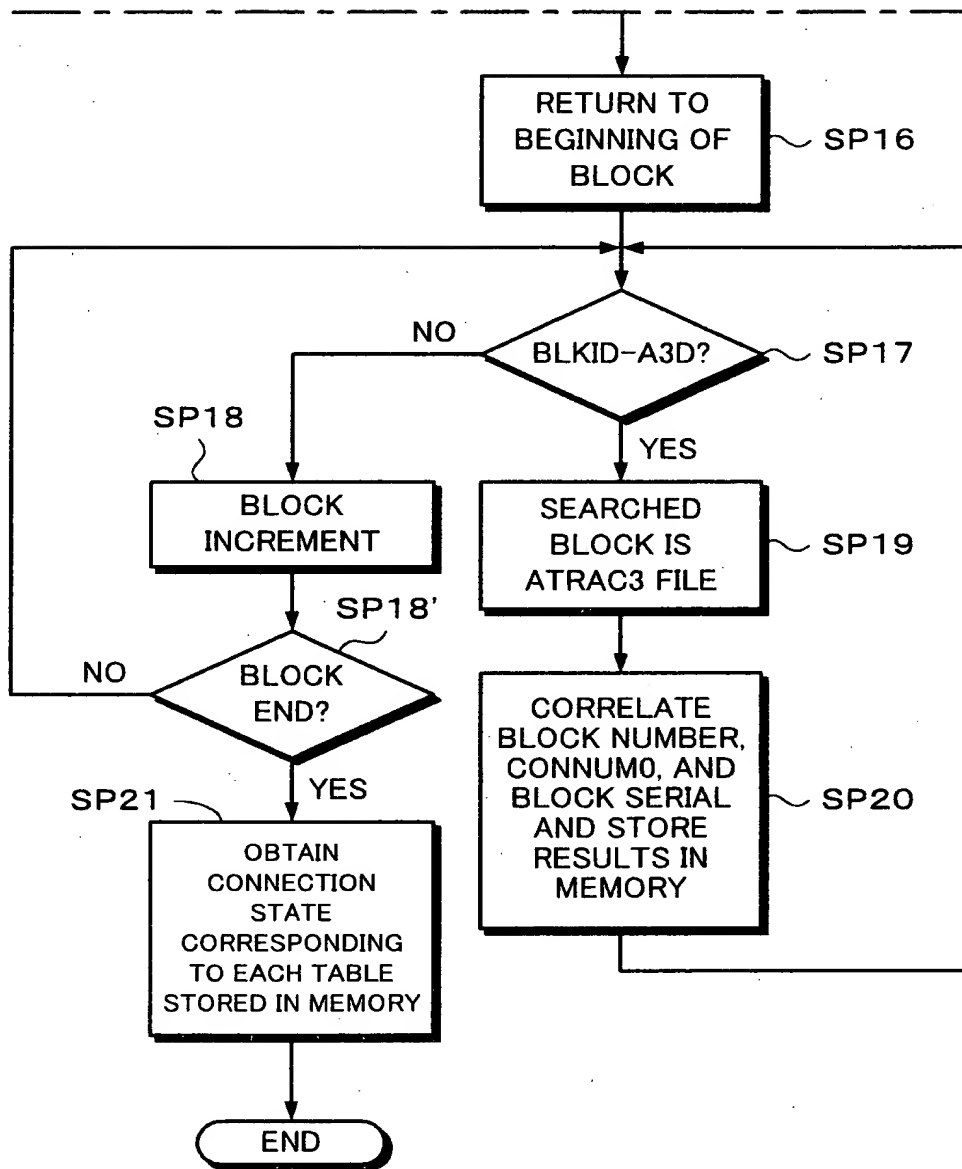
Fig. 24B

Fig. 24C

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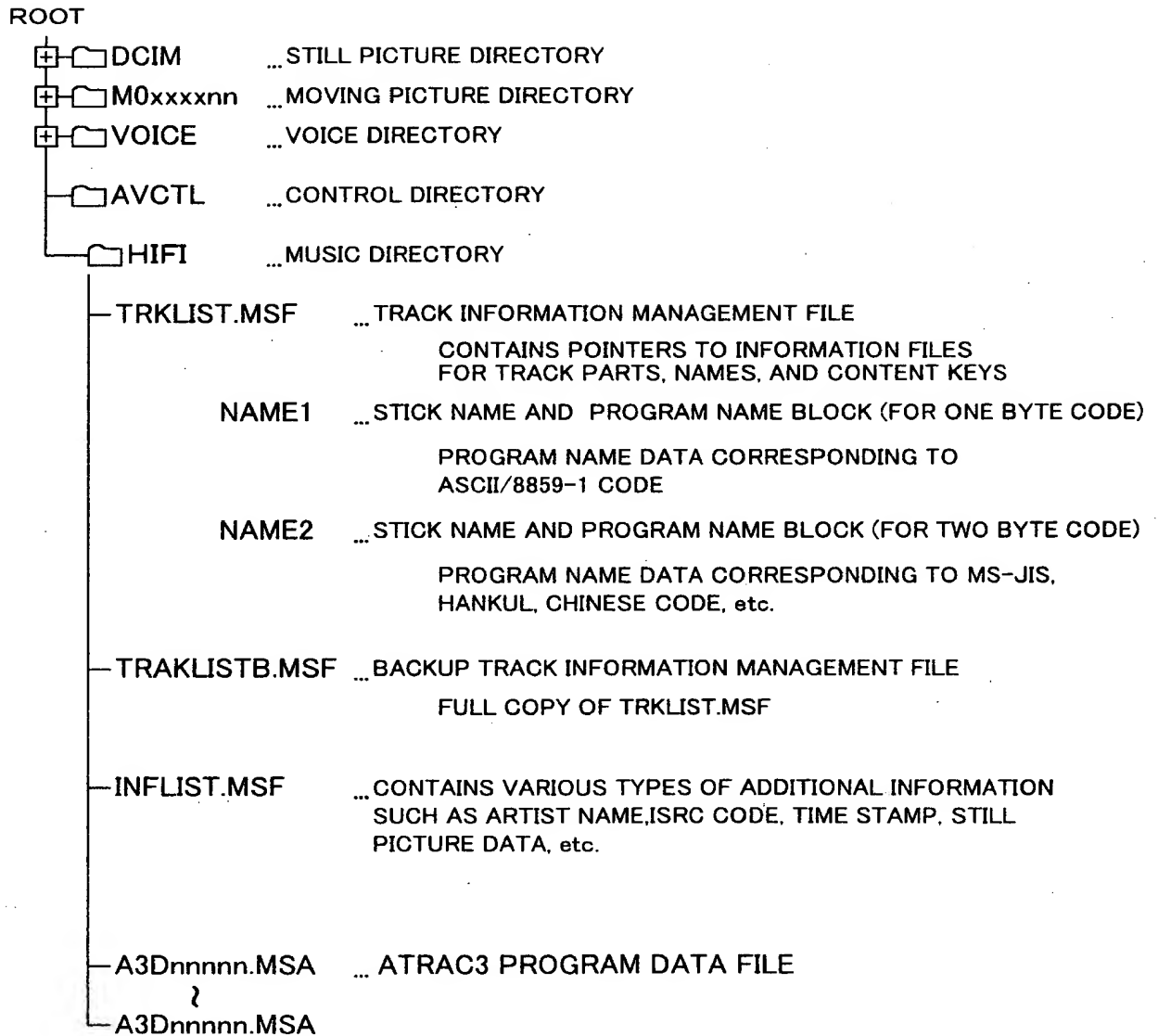
Fig. 25

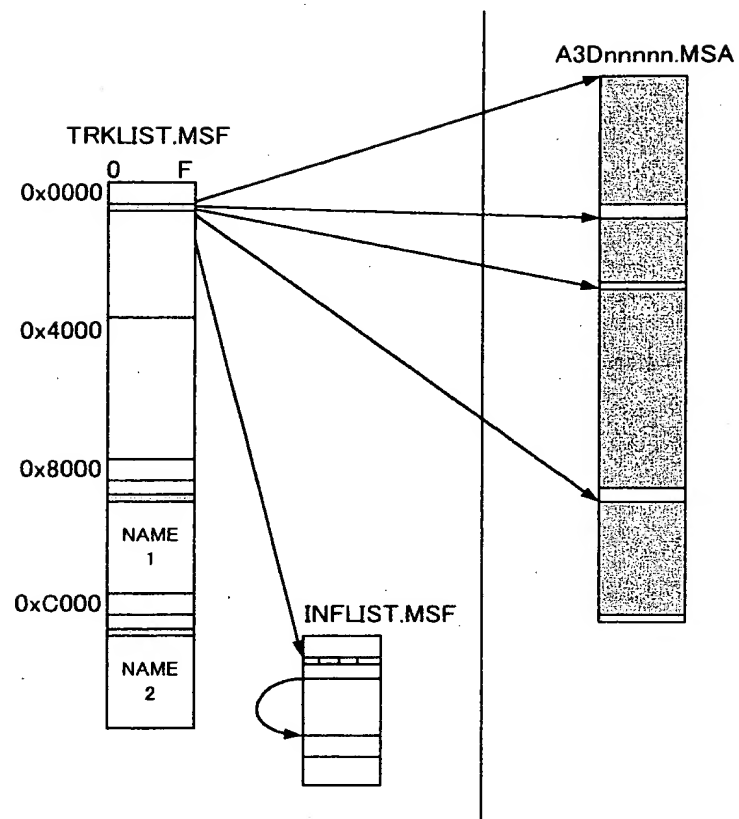
Fig. 26

Fig. 27

TRACK INFORMATION MANAGEMENT FILE
(TRKLIST.MSF)

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0x0000	BLK ID-TL0				T-TRK		MCode		REVISION				YMD h ms			
0x0010	N1	N2	MSID		S-TRK		PASS		APP		INF-S		S_YMD h ms			
0x0020	TRKINF-001															
	PRTINF-001															
	TRKINF-002															
	PRTINF-002															
	}															
0x3FF0	BLK ID-TL0						MCode		REVISION							
0x4000	BLK ID-TL1						MCode		REVISION							
	}															
	DETAIL OF TRKINF-nnn/PRTINF-nnn															
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
	T0	LT	INF		FNM-nnn				CONTENTS KEY-nnn							
	-nnn MG(D) SERIAL-nnn															
	APP_CTL				CONNUM-nnn				P-nnn		XT		INX-nnn			
	YMDhms-S				YMDhms-E				MT CT		CC CN		Reserved			
	PR		A-0000		PRTSIZE-0000				PRTKEY-0000							
	}															
	PR		A-nnnn		PRTSIZE-nnnn				PRTKEY-nnnn							
0x7FF0	BLK ID-TL1						MCode		REVISION							

Fig. 28

STICK NAME AND PROGRAM NAME BLOCK-FOR ONE BYTE CODE

	0	1	2	3	4	5	6	7
0x8000	BLK ID-NM1					MCode		
0x8008	PNM1-S				PNM1-001			
0x8010	PNM1-002				PNM1-003			
	§							
0x8668	PNM1-408				NM1-S			
	NM1-001							
	NM1-002							
	NM1-003							
	§							
	NM1-408							
0xBFF0								
0xBFF8	BLK ID-NM1					MCode		

Fig. 29

STICK NAME AND PROGRAM NAME BLOCK-FOR TWO-BYTE CODE

	0	1	2	3	4	5	6	7
0xC000	BLK ID-NM2						MCode	
0xC008	PNM2-S				PNM2-001			
0xC010	PNM2-002				PNM2-003			
	§							
0xC668	PNM2-408				NM2-S			
	NM2-001 NM2-002 NM2-003 § NM2-408							
0xFFFF0								
0xFFFF8	BLK ID-NM2						MCode	

00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000

Fig. 30

ATRAC3 DATA FILE (A3Dnnnnn.MSA) ... 1 SoundUnit=N BYTES

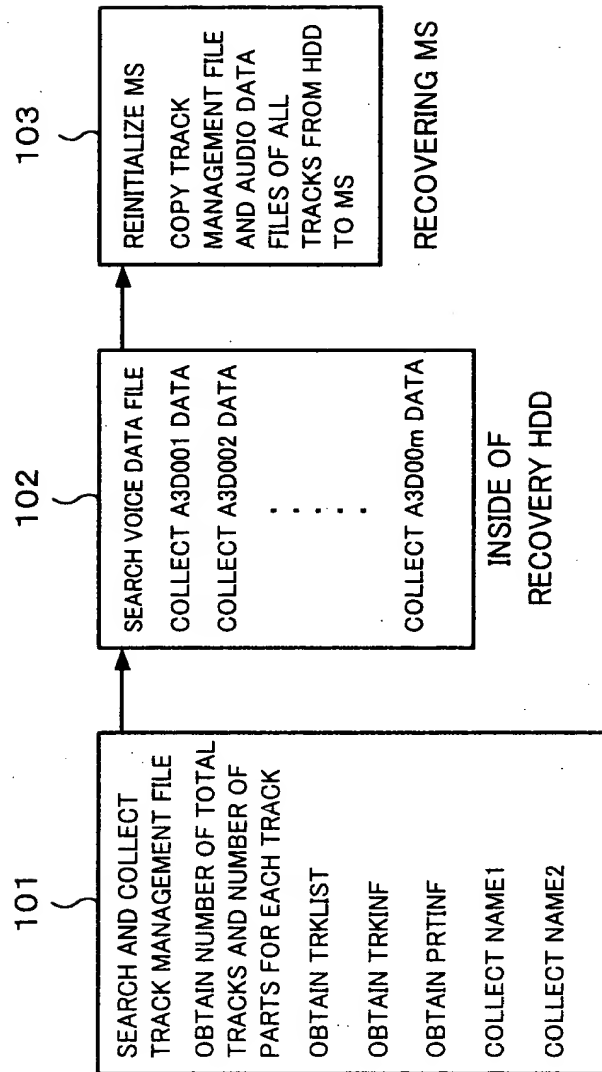
	0	1	2	3	4	5	6	7
0x0000	BLK ID-A3D						MCode	
0x0008	BLOCK SEED							
0x0010	CONNUM0				BLOCK SERIAL			
0x0018	INITIALIZATION VECTOR							
0x0020	SU-000 (N byte)							
0x0020 +N/8	SU-001 (N byte)							
	SU-002 (N byte)							
	SU-(nnn-1) (N byte)							
0x3FF0 -N/8	Reserved (M byte)							
0x3FF0	BLOCK SEED							
0x3FF8	BLK ID-A3D						MCode	

Fig. 32

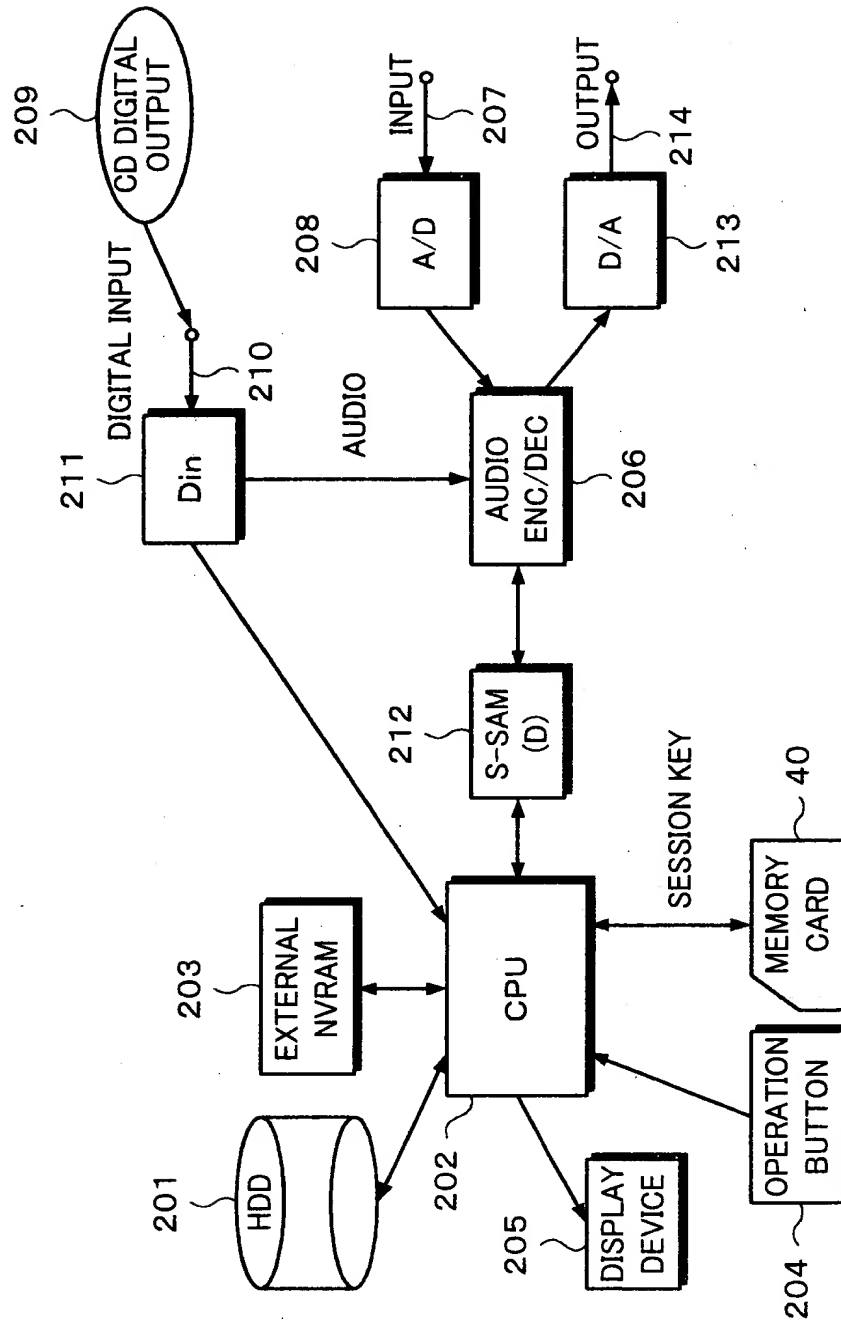
ADDITIONAL INFORMATION DATA STRUCTURE

0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
IN	ID	SID	00	SIZE	MCode	VARIABLE LENGTH DATA									

Fig. 33



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[illegible]

Fig. 35

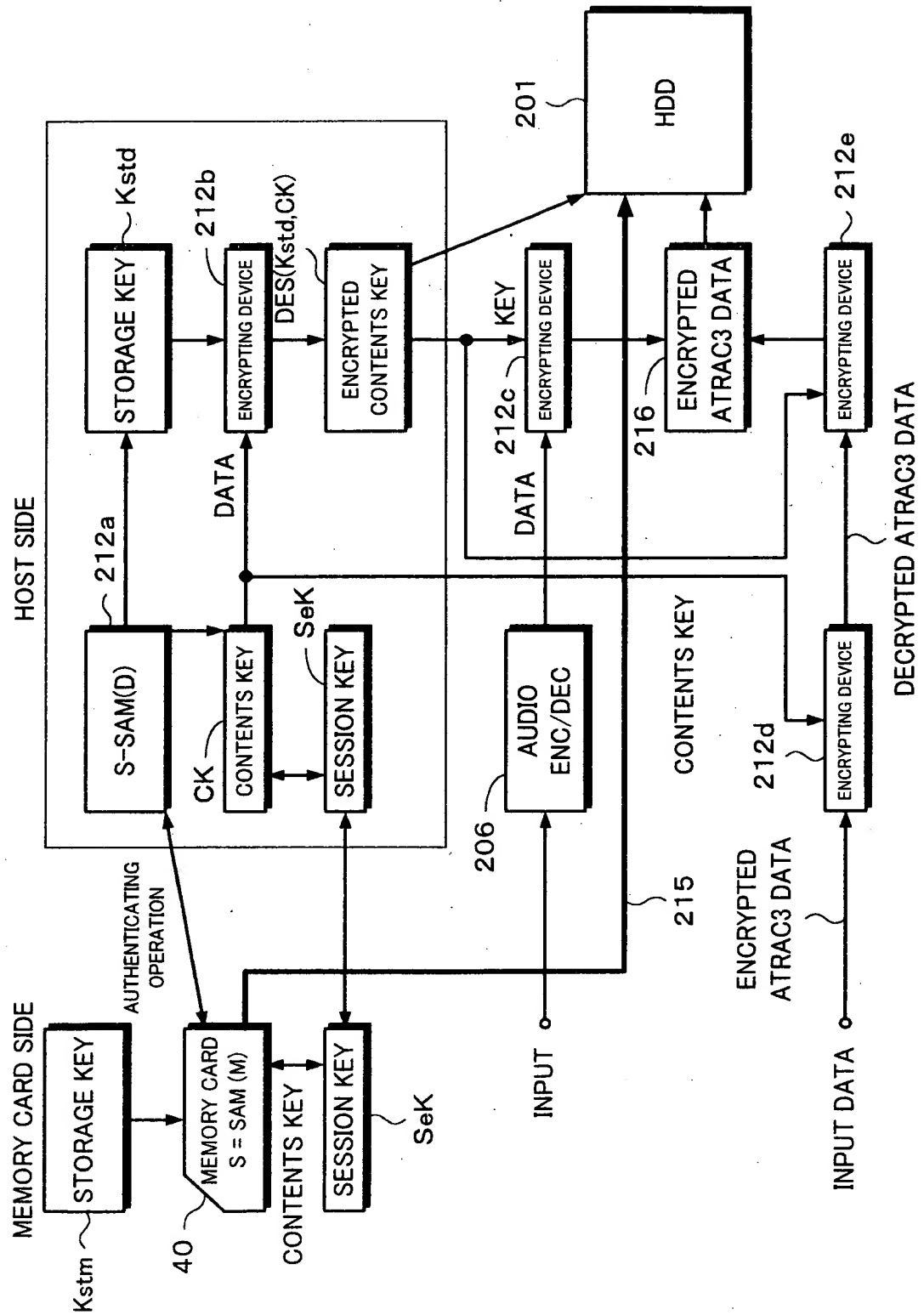


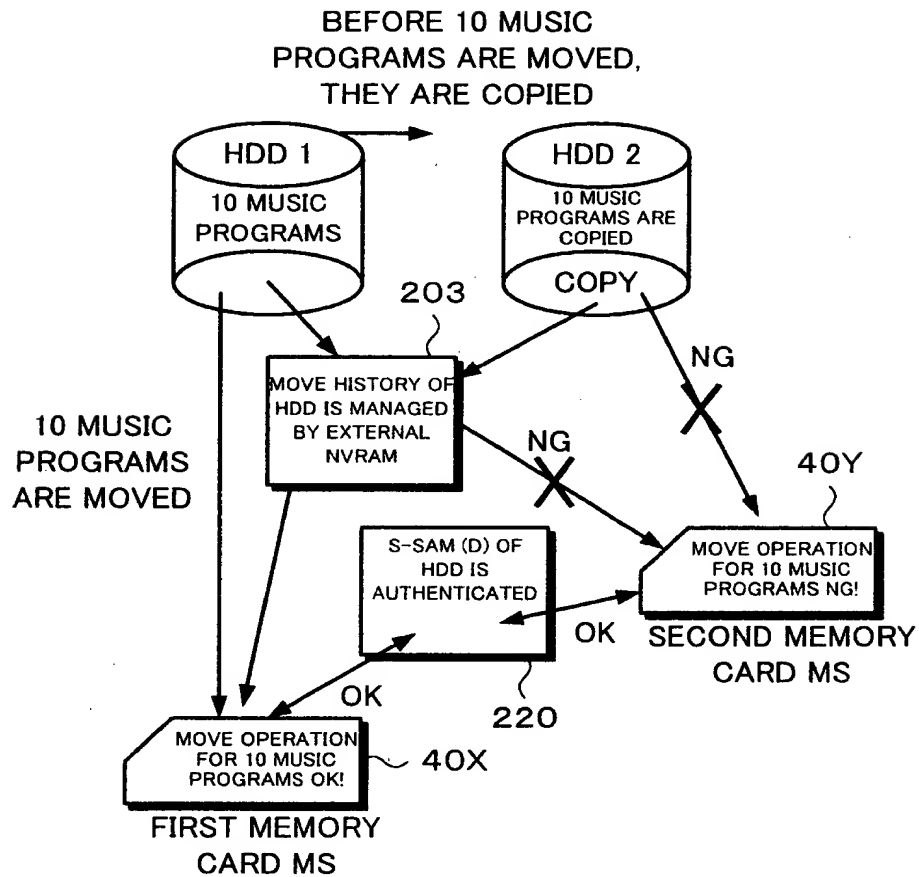
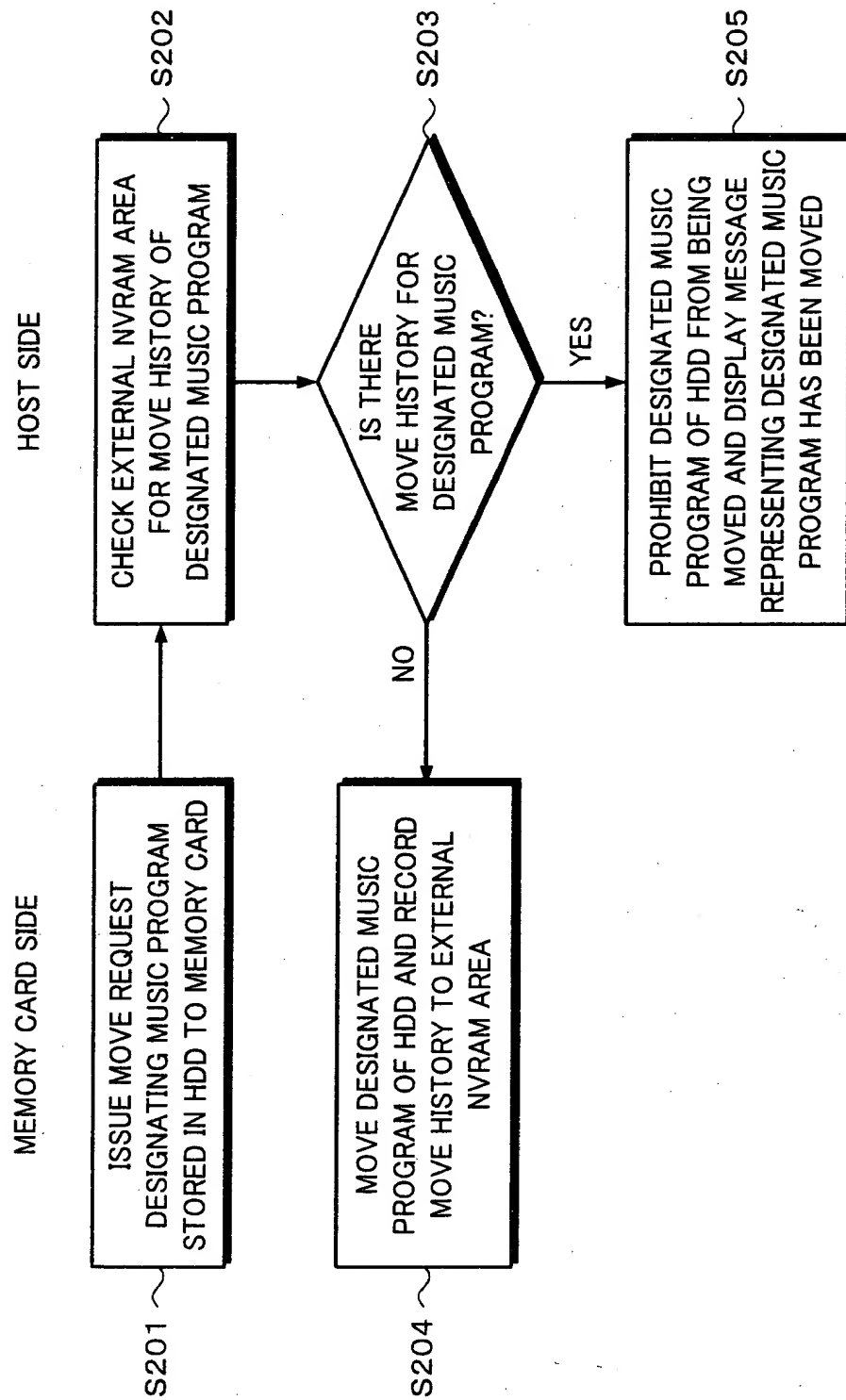
Fig. 36

Fig. 37



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